



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>

Dr. H. H. H. H. H.
PITOME

AND AUSCULTATION,

AND THE
DIAGNOSIS OF AFFECTIONS

OF THE
LUNGS AND HEART;

AND THE RECENTLY DISCOVERED
CHANGES IN THE TOPOGRAPHY
AND ANATOMICAL CONSTRUCTION
AS RELATED TO PHYSICAL
DIAGNOSIS.

AND

SYNOPSIS OF CHEMICAL EXAMINATION
OF URINE;

THERMOMETRY AND ELECTRIZATION AS
AIDS TO DIAGNOSIS, ETC.

WITH PLATES AND WOOD CUTS.

BY DR. H. H. H. H. H.

Chief Medical Officer and Professor of
Medicine, College.

NEW YORK:
J. B. LIPPINCOTT & CO.
1875.

76.3
53
375



EPITOME
OF
PERCUSSION AND AUSCULTATION,
AND THE
PHYSICAL DIAGNOSIS OF AFFECTIONS
OF THE
LUNGS AND HEART;
*WITH A SUMMARY OF THE REGIONS OF THE
CHEST AND ABDOMEN TOPOGRAPHICALLY
AND ANATOMICALLY CONSIDERED,
AS RELATED TO PHYSICAL
DIAGNOSIS:*
AND
A SYNOPSIS OF CHEMICAL EXAMINA-
TION OF URINE:
THERMOMETRY AND ELECTRIZATION AS
AIDS TO DIAGNOSIS, ETC.,
WITH PLATES AND WOOD CUT.

BY ALEX. B. SHAW, M. D.
Adjunct Professor of Clinical Medicine and Principles of
Diagnosis, Mo. Med. College.

ST. LOUIS:
GRAY, BAKER & CO.
1875.

I

Entered according to Act of Congress, in the year 1875. by
ALEX. B. SHAW, M. D.,
In the Office of the Librarian of Congress, at Washington.

MAJ 31 1875

L76.3

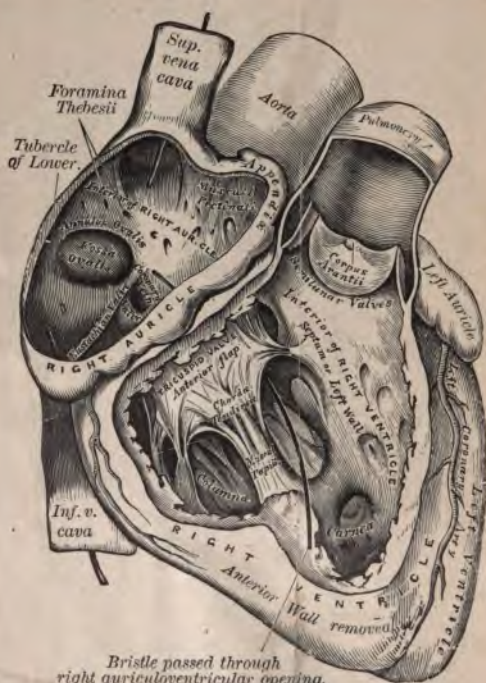
S53

1875

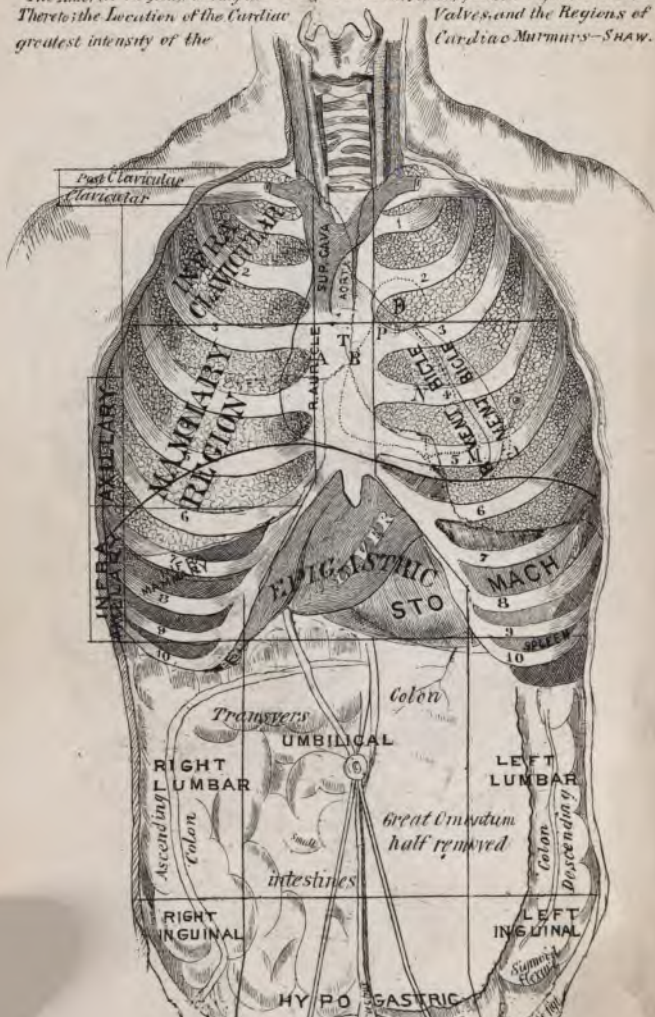
TABLE OF CONTENTS.

	<i>Pages.</i>
Regions of the anterior surface of the chest - - - - -	5—7
Regions of the posterior surface of the chest - - - - -	7—8
Regions of the lateral surfaces of the chest - - - - -	8
Regions of the abdomen - - - - -	8—10
Relative position of the valves of the heart - - - - -	10
Physiological action of the heart - - - - -	10—11
Percussion phenomena - - - - -	11—13
Auscultatory phenomena - - - - -	13—15
Adventitious sounds produced within the bronchial tubes, air cells, pleura, and pulmonary cavities - - - - -	16—19
Auscultation of the voice - - - - -	18—19
Endocardial murmurs and other physical signs involved in the diagnosis of diseases of the heart - - - - -	19—23
Synopsis of physical signs involved in the diagnosis of pulmonary affections - - - - -	23—27
Diagnostic examination of the urine - - - - -	28—34
Electricity as an aid to diagnosis - - - - -	34—35
Thermometry - - - - -	35—39

9125



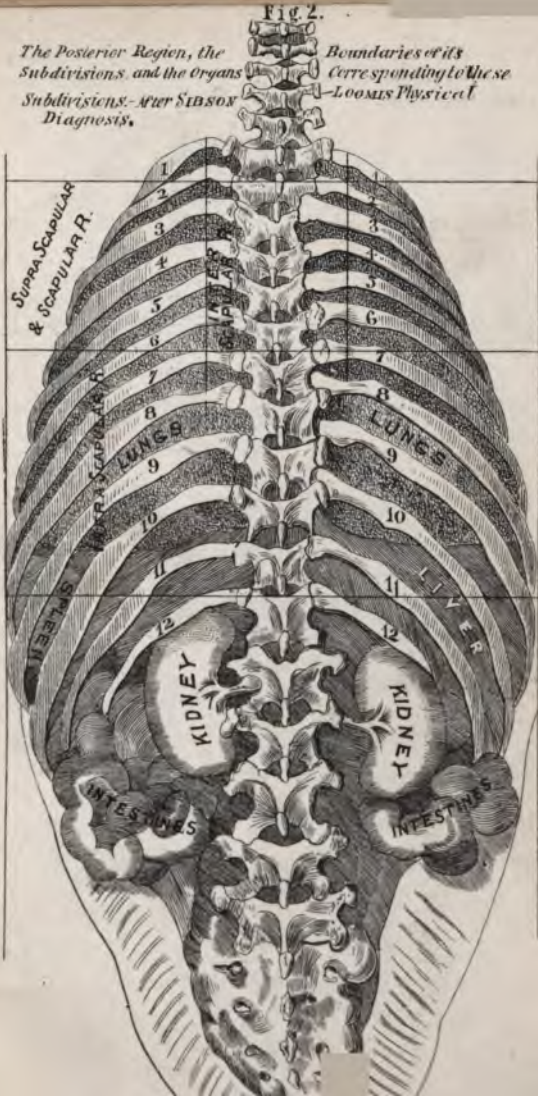
The Anterior Region, showing its Subdivisions, and the organs Corresponding Thereto; the Location of the Cardiac Valves, and the Regions of Cardiac Murmurs—SHAW.



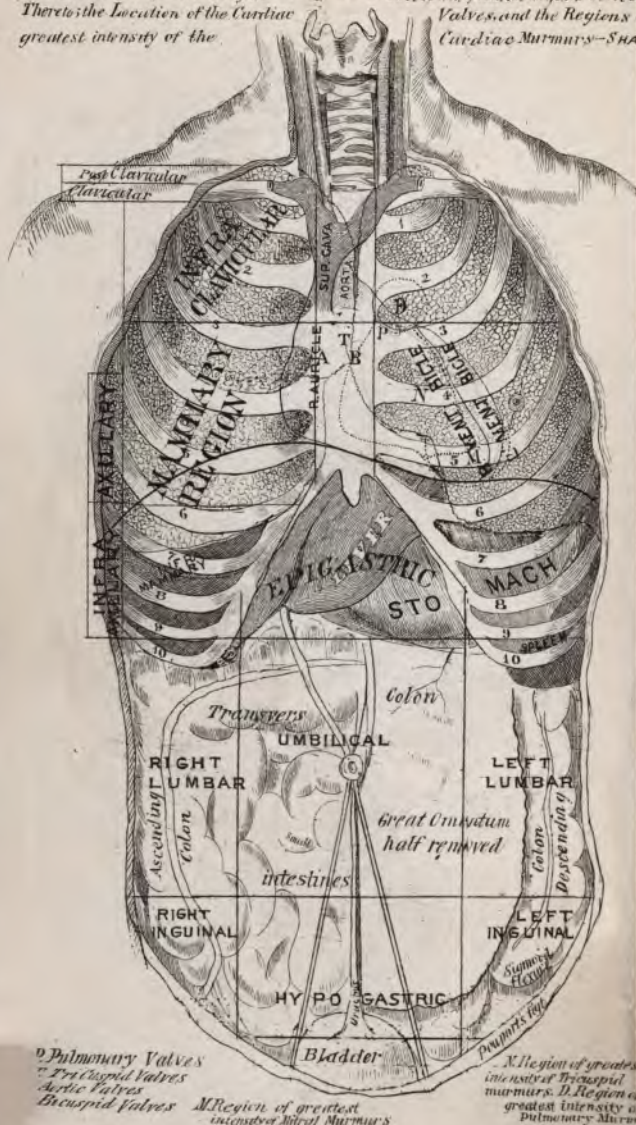
The Pulse.

Fig. 2.

The Posterior Region, the Subdivisions, and the Organs Corresponding to these Subdivisions. After SIDSON - Loomis Physical Diagnosis.

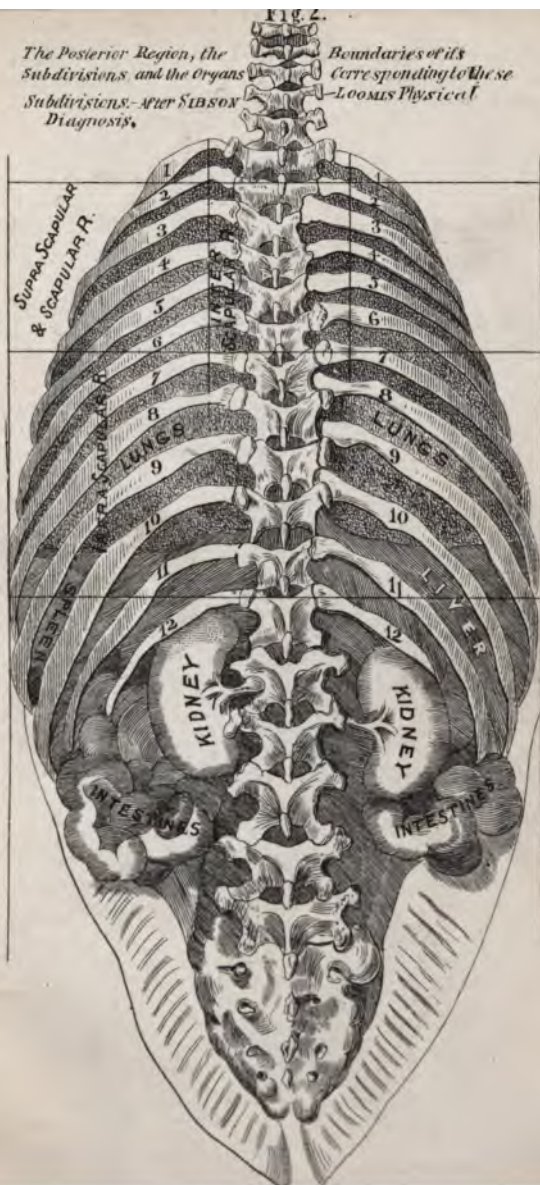


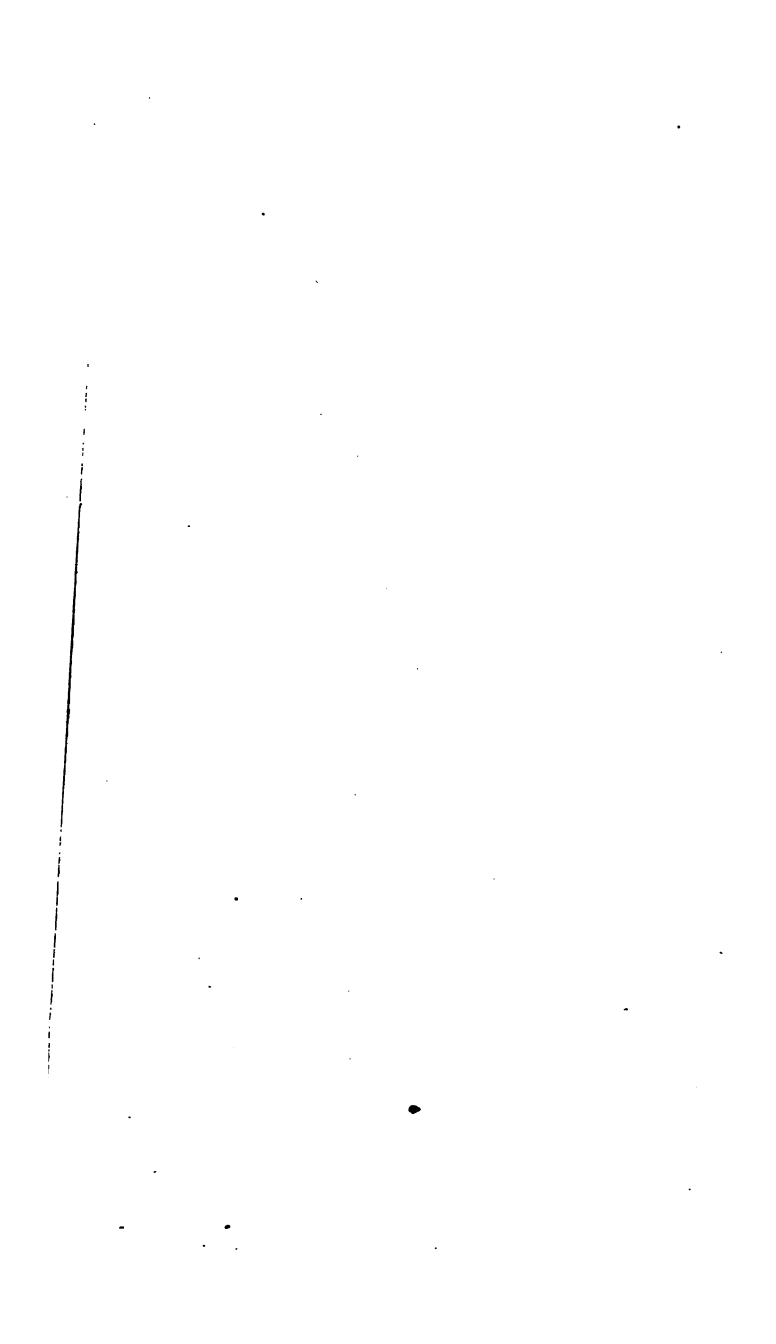
The Anterior Region, showing its subdivisions, and the organs corresponding to the location of the Cardiac Valves, and the Regions of greatest intensity of the Cardiac Murmurs—SHA



*The Posterior Region, the
Subdivisions, and the Organs
Subdivisions: After SEBSON
Diagnosis.*

*Boundaries of its
Corresponding to these
Subdivisions: Loomis Physical*





TOPOGRAPHY
OF THE
CHEST AND ABDOMEN,
WITH A SUMMARY OF
THE ORGANS AND NORMAL PERCUSSION AND
ASCULTATORY PHENOMENA INCIDENT
TO EACH REGION.

REGIONS OF THE ANTERIOR SURFACE OF THE
CHEST.

These regions are all double—i. e., right and left, except the sternal.

POST OR SUPRA-CLAVICULAR.—The space behind the clavicle, and immediately over the *apex* of the lung; more concave on the left than the right side. This region is often abnormally convex in emphysema, and generally depressed in tuberculosis. The normal respiratory sound is the *vesicular murmur*, and the percussion note is that known as *vesicular resonance*.

CLAVICULAR.—The region occupied by and coextensive with the clavicle; contains lung substance. Vesicular resonance on percussion.

INFRA-CLAVICULAR.—The space between the clavicle and the third rib. Normally slightly convex; bulging in emphysema and flattened in tuberculosis; contains a very important portion of upper lobe, primary bronchi, etc. The right bronchus beneath, the left below the second costal cartilage. The aorta ascends as high as the second costal cartilage on the left

side. Respiration vesicular, except immediately over primary bronchi, where it is bronchial or tubular. Vesicular resonance on percussion. Greatest vesicular resonance and purest vesicular respiration on left side. Bronchial respiration and voice most intense (and the former highest in pitch) on right side.

In this region we hear the sounds emanating from the primary bronchi, and it is in this and the two preceding ones that we usually find the signs of incipient tuberculosis.

MAMMARY.—Extends from the third to the sixth rib. The right is occupied by lung substance and a small portion of the right auricle and ventricle. The left contains, beside lung, a portion of the right ventricle, and the left ventricle and auricle. Vesicular resonance and respiration all over this region, except in a triangular space, known as the *cardiac*, situated at the left margin of the sternum, with its apex at the fourth and its base at the sixth costal cartilage. Vocal resonance greatest on the right side.

INFRA-MAMMARY.—Extends from the sixth to the ninth rib. The right contains lung substance down to the seventh rib, and the liver which rises in the center of the chest to the fourth inter-costal space. Resonance diminishes from above downwards till we have flatness over the liver. The left contains lung to sixth inter-costal space, below which is found the stomach and spleen. Resonance vesiculo-tympanic over lung; tympanic over stomach when distended with gas, and dull over spleen. Vocal resonance greater on the right than the left side.

THE STERNAL region is co-extensive with the sternum; that portion above the third costal cartilages (*upper sternal*) contains the bifurcation of the trachea, below which the lungs approximate very closely the mesian line, overlapping the aorta and descending cava. Respiration tubular.

The *lower sternal*, beginning at the third costal, terminates at the ensiform cartilage, and contains a portion of both auricles and ventricles, etc.

REGIONS OF THE POSTERIOR SURFACE OF THE CHEST.

These regions are all double—i. e., right and left.

SCAPULAR.—The space occupied by the scapula. Divided into *upper* and *lower*—the former that portion above, the latter that below the scapular spine. Contains lung substance. The great inter-lobar fissure begins in the upper portion, and terminates anteriorly on the right side in the fifth, and on the left side in the fourth inter-costal space.

This fissure is of importance in diagnosing lobar pneumonia. Respiration sometimes most vesicular and intense on the left side, and frequently broncho-vesicular on the right. Vocal resonance always greater on the right side.

INFRA-SCAPULAR. — Extends from inferior angle of scapula to floating ribs; contains lung substance and liver on the right, and lung substance, the stomach and spleen on the left side. Vesicular respiration down to tenth rib. Resonance on percussion diminishes as we descend until we find flatness over the liver on the right, and vesiculo-tympanitic resonance over the

stomach, with dullness over the spleen, on the left side. Vocal resonance generally greater on right than left side. As the principal portion of the lower lobes are contained in the infra-scapular regions, it is here that the physical signs of pneumonia are usually developed.

INTER-SCAPULAR. — Bounded externally by the scapula, and internally by the vertebræ; contains lung substance, bronchial glands, primary bronchus, etc. Bifurcation of the trachea occurs about the third, and the aorta passes in front of the fourth, dorsal vertebra. In this region is found the sounds developed in the primary bronchi.

LATERAL REGIONS OF THE CHEST.

These regions are double — i. e., right and left.

AXILLARY. — Extends from the summit of the axilla to the sixth rib; contains lung substance, and deeply seated, the bronchial tubes. Vesicular resonance on percussion, and vesicular respiration. Vocal resonance greater on the right side.

INFRA-AXILLARY. — Extends from the sixth to the tenth rib; contains besides lung substance, the liver on the right, and stomach and spleen on the left side. Resonance over lung, flatness over liver, and vesiculo-tympanic resonance over the stomach. Vesicular respiration over lung substance. Vocal resonance more intense on right side.

REGIONS OF THE ABDOMEN.

A line encircling the body parallel with the cartilages of the ninth ribs, and another parallel

with the crests of the ilia will divide the abdominal cavity into three zones, viz., the upper, middle, and lower; and if two parallel lines be drawn from the eighth costal cartilage to the center of Poupart's ligament, one on either side, each of these zones will be divided into three regions, viz., *right*, *left* and *anterior*.

The anterior region of the upper zone is the *epigastric*; the lateral regions, the right and left *hypochondriac*. The anterior region of the middle zone is the *umbilical*; the lateral regions, the right and left *lumbar*. The anterior region of the lower zone is the *hypogastric*; the lateral regions, right and left *inguinal*. The lower portion of the hypogastric region is often styled *supra-pubic*.

The **EPIGASTRIC** contains left lobe of liver, lobus spigelii, cœliac axis, hepatic vessels, pyloric extremity of stomach, pancreas, aorta, etc.

The **RIGHT HYPOCHONDRIAC** contains right lobe of liver, gall bladder, colon, duodenum, part of right kidney, etc.

The **LEFT HYPOCHONDRIAC** contains spleen, left extremity of stomach, part of left kidney, colon, etc.

The **UMBILICAL** contains transverse colon, duodenum, jejunum, etc.

The **RIGHT LUMBAR** contains ascending colon, part of kidney, etc.

The **LEFT LUMBAR** contains descending colon, part of kidney, etc.

The **HYPOGASTRIC** contains small intestines, bladder in children, and in adults when distended, etc.

The **RIGHT INGUINAL** contains cæcum, ileo cæcal valve, appendix vermiformis, ureter (R, ovary in females), etc.

The LEFT INGUINAL contains sigmoid flexure of the colon, ureter (L. ovary in females), etc.

RELATIVE POSITION OF THE CARDIAC VALVES.

The HEART extends from the second inter-costal space (base) to the sixth costal cartilage (apex), and from half an inch to the right of the sternum to within an inch of, and a little below the left nipple.

The AORTIC VALVES (*A. Semilunar*)—Behind and near right margin of sternum, opposite third inter-costal space. (See A, Fig. 1.)

The PULMONARY VALVES (*P. Semilunar*)—Above articulation of third left inter-costal cartilage with sternum. (See P, Fig. 1.)

The TRICUSPID VALVES (*R. Auriculo-Ventricular*,)—On a line with third costal cartilage, behind center of sternum. (See T, Fig. 1.)

The BICUSPID VALVE (*L. Auriculo-Ventricular*,)—A little to the left of the center of the sternum, and opposite third intercostal space. (See B, Fig. 1.)

PHYSIOLOGICAL ACTION OF THE HEART.

A complete pulsation consists of a contraction (*systole*), dilatation (*diastole*), and period of rest. Dividing the time of a pulsation into fifths, two-fifths would be occupied by the *systole*, one-fifth by the *diastole*, and two-fifths by the period of rest and auricular contraction. (See diagram on page 11.)

This regular succession of the sounds constitutes the *rythm* of the heart.

The first sound immediately precedes the carotid pulse, and is synchronous with the cardiac impulse and apex beat. The second is

abrupt and clicking in character. The longest interval is between the second and first sounds, and the shortest, between the first and second sounds.

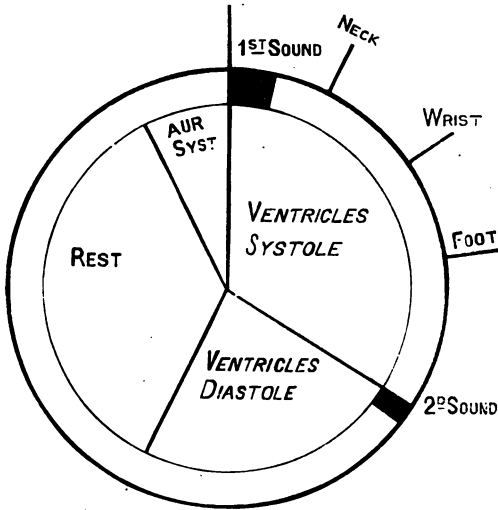


Diagram showing the physiological action of the heart in connection with its external manifestations.—*Gairdner*. *

Summary of Pulmonary Percussion and Auscultatory Phenomena, their Distinctive Characters and significance.

PERCUSSION.

✓ **NORMAL VESICULAR RESONANCE** is the resonance obtained by percussion over lung substance, in the healthy chest. Is of low pitch, and peculiar vesicular quality. More intense,

* Loomis' Physical Diagnosis.

vesicular in quality, and lower in pitch, over the summit of the left than the right lung. Modified by disease as regards its intensity, quality, pitch and duration.

DIMINISHED RESONANCE (*Dullness.*)—Diminished intensity, greater resistance, higher pitch and shorter duration than is normal. Generally denotes a greater or less degree of solidification. Incident to phthisis, pulmonary congestion, or œdema, small pleuritic effusion, thickened pleura, pulmonary collapse, etc.

ABSENCE OF RESONANCE (*Flatness.*)—Sonorousness wanting, pitch considerably elevated, and resistance markedly increased. Incident to complete solidification as in pneumonia—second stage—large pleural effusion, extensive pulmonary œdema, tumor in chest, etc.

EXAGGERATED RESONANCE (*Vesiculo-Tympanitic.*)—Intensity increased; mixed vesicular and tympanitic in quality, pitch elevated, duration diminished. Incident to emphysema, compressed lung resting on liquid effusion, and to the healthy lung where respiration in its fellow is considerably abridged.

TYMPANITIC RESONANCE.—A hollow, empty, drum-like sound, found in health over stomach and intestines when distended with gas. When developed in the chest it is devoid of vesicular quality, more intense than vesiculo-tympanitic resonance. Pitch greatly elevated in some instances, and lowered in others. Incident to pneumo-thorax, tuberculous cavities with rigid walls, some cases of solidified lung, etc.

AMPHORIC RESONANCE.—A modification of tympanitic resonance, having a musical intona-

tion. Incident to the same conditions of the lungs as tympanitic resonance.

CRACKED METAL RESONANCE — (*Bruit de pot fêlé.*)—Imitated by striking the clasped hands on the thigh, or the jingling of small coin in the hand. A variety of tympanitic resonance; sometimes found in the chests of healthy young girls. Incident to accumulation of liquid in bronchial tubes, tuberculous cavities containing air and liquid, occasionally found over solidified lung, etc.

AUSCULTATION.

The **NORMAL VESICULAR MURMUR** is the soft, breezy sound heard all over the lungs, except directly over the bronchial tubes anteriorly and posteriorly; of greatest intensity, purest quality and lowest pitch over the left apex anteriorly. Inspiratory and expiratory sounds continuous; inspiratory three times as long, and more intense and higher in pitch than expiratory. A compound sound produced in the vesicles and bronchial tubes, and having as a component a transmitted tracheal sound. Expiratory sound is sometimes prolonged on right side in females. Respiratory sound prolonged and elevated in pitch in forced respiration.

EXAGGERATED VESICULAR MURMUR, (*Puerile* or *Supplementary Respiration*) is the normal vesicular murmur increased in intensity. Ordinarily an evidence of some disease affecting the respiratory function in the opposite lung, as pleurisy, effusion, pneumonia, tumor, or occlusion of the bronchial tubes, etc., which diminishes or abolishes the murmur on the diseased side.

DIMINISHED VESICULAR MURMUR.—The intensity of the murmur is lessened, otherwise its character is unchanged; found on the side affected. Incident to emphysema where there is dilatation and loss of elasticity of the air cells and bronchioles; pleurisy, pleurodynia, incipient tuberculosis, diminution of calibre of bronchial tubes, etc. When present, induces supplementary action in the other lung.

SUPPRESSED RESPIRATORY MURMUR.—Absolute absence of any respiratory sounds. Incident to collapsed lung, tumor, or large pleuritic effusion, occlusion of primary bronchus, and some cases of consolidation of the lung.

INTERRUPTED RESPIRATION.—The normal respiratory sounds are smooth, even and continuous, but we sometimes find, especially with inspiration, the sound rough and jerking in character ("cogged-wheel respiration.") Incident to asthma, incipient phthisis, pleurodynia and pleurisy.

PROLONGED INTERVAL BETWEEN INSPIRATION AND EXPIRATION.—Produced by shortened inspiration, as in consolidation, or by a deferred expiration, as in emphysema.

PROLONGED EXPIRATION.—Incident to emphysema and phthisis; in the former the pitch is lower than the inspiratory sound, in the latter it is higher than the inspiratory sound, and becomes somewhat tubular.

RUDE OR BRONCHO-VESICULAR RESPIRATION.—Incident to partial solidification of lung, as in incipient phthisis; it consists of a blending of the vesicular and bronchial respiration, the

bronchial gaining the ascendancy as solidification advances. Keeping pace with this change there is a prolongation, increased intensity, and an elevation in pitch of the expiratory sound, until it becomes more intense, prolonged and elevated in pitch than inspiration.

BRONCHIAL RESPIRATION.—Is found in health over and emanating from the bronchial tubes ; is tubular or blowing in quality, of higher pitch and greater intensity than the vesicular murmur. Inspiratory and expiratory sounds not continuous ; the latter higher pitched, more intense, and as long or longer than the former ; when found elsewhere than over the bronchial tubes it indicates solidification, and is incident to pneumonia, phthisis, pulmonary apoplexy, condensation from compression, etc.

CAVERNOUS RESPIRATION. — On inspiration, the sound is soft, low-pitched and blowing ; on expiration, it is lower pitched, puffing and prolonged. In both instances it is devoid of either tubular or vesicular quality (contrast with bronchial respiration.) Incident to the passage of air into and out of a cavity with flaccid walls, which is empty, superficial and of considerable size. Heard within a circumscribed space, and often surrounded by bronchial respiration.

AMPHORIC RESPIRATION.—May be imitated by blowing gently into the mouth of an empty bottle, and has a musical intonation, and metallic character ; accompanies both respiratory acts, especially expiration. Incident to pneumothorax with perforation of lung, and large, empty tuberculous cavities, having rigid walls, and communicating freely with a large bronchial tube.

ADVENTITIOUS SOUNDS PRODUCED WITHIN THE BRONCHIAL TUBES, AIR CELLS, PLEURA AND PULMONARY CAVITIES.

SIBILANT RALE.—A dry, hissing, whistling, high pitched, sometimes musical sound produced in the smaller bronchial tubes, from diminution of their calibre by spasmodic contraction, or the thickening of the mucous membrane of, or the presence of viscid secretions within the tubes. Incident to asthma, bronchitis, etc.

SONOROUS RALE.—A dry, low-pitched, snoring sound, produced within the larger bronchial tubes. Caused in the same manner as the sibilant. Incident to bronchitis, asthma, etc.

PLEURAL FRICTION.—A dry, superficial grazing, rubbing, sometimes rasping sound, produced by the movement in opposite directions of the roughened visceral and costal-pleural surfaces in respiration. Incident to pleurisy before effusion occurs, and after it has been removed.

CRACKLING (*Crepitation*.)—A dry sound, usually heard at the end of inspiration; seems to come from a distance, and consists of a few crepitations; an early sign of phthisis; rarely found at the apex, except in tuberculosis. Produced either by creaking of pleuritic adhesions or pulmonary crepitation.

PULMONARY CRUMPLING.—Dry sounds resembling those produced by the inflation of a dried bladder. Laennec supposed this sound to be due to the forcible distention of large sacs found in pulmonary emphysema.

CREPITANT RALE.—A moist, fine, crackling sound, heard *only* on inspiration. Produced in

the air vesicles by a forcible disruption of adherent surfaces, thus making a snapping sound. Almost pathognomonic of the first stage of pneumonia: sometimes heard in pulmonary oedema, bronchitis and third stage of pneumonia.

STREPITANT RALE.—A moist, fine, bubbling sound, coarser than the crepitant. Produced in the smaller bronchi by the bursting of small bubbles, few in number, formed by the passage of air through liquid. Present with inspiration and expiration. Incident to capillary bronchitis, pulmonary oedema, bronchitis and resolving stage of pneumonia: in the latter case it is styled "*râle moussé*." Sometimes found at the apex in incipient tuberculosis.

MUCOUS RALES. are moist, bubbling sounds, produced in the bronchial tubes by the passage of air through liquid: are coarse or fine, or large or small according as they emanate from the larger or smaller bronchial tubes, and incident to the presence of pus, blood, mucus or other liquid therein.

GUGLING. is a moist sound, due to the agitation of liquid in a cavity communicating with a bronchial tube, by the passage of air through the liquid, thereby forming bubbles. Circumscribed, and usually conjoined with other signs of a cavity.

METALLIC TINKLE.—A series of fine, tinkling sounds, metallic in character, and similar to the sound produced by dropping fine sand into a glass vase. Present with either, or both respiratory acts: speaking or coughing. Evinces the presence of air and liquid in a space of con-

siderable size, mostly found in pneumo-hydro thorax.

AUSCULTATION OF THE VOICE.

NORMAL VOCAL RESONANCE, is a diffused, distant, resounding sound heard all over the chest in vocalization ; it is accompanied by a vibratory thrill (*vocal fremitus*) ; varies greatly in different individuals, but always more intense over the right side ; increased in solidification and condensation of lung, and diminished in pleuritic effusion, thickened pleura, emphysema, etc.

BRONCHOPHONY (bronchial voice), found in health over primary bronchi ; when discovered elsewhere, indicates solidification of the lung ; the voice seems superficial and intensified, and its pitch is elevated.

PECTORILOQUY (chest voice), is an exaggerated bronchophony in which the articulate words are transmitted to the ear ; closely resembles the laryngeal voice ; quite rare. Incident to extreme solidification, and tuberculous excavations having rigid walls.

ÆGOPHONY, is another modification of bronchophony, in which the voice is wavy or tremulous, and nasal in character, and resembles the bleating of a goat. Incident to pleurisy with effusion ; very rare.

AMPHORIC VOICE, or *echo*, is a sort of vocal resonance, of a ringing, hollow, metallic, and somewhat musical character, and follows the normal voice or whisper. Present in pneumothorax, and some large cavities with rigid walls,

WHISPERING RESONANCE. *Exaggerated Bronchial Whisper*, *Whispering Bronchophony*, *Whispering Pectoriloquy*, *Cavernous Whisper*, and *Amphoric Whisper* are but modifications of the foregoing, induced by whispering instead of normal vocalization, and have the same significance.

The RESONANCE OF THE COUGH may be either bronchial, cavernous, or amphoric. The names are amply descriptive; they are heard under the same conditions as the corresponding varieties of respiration, and have a like significance.

ENDOCARDIAL MURMURS, AND OTHER PHYSICAL SIGNS INVOLVED IN DIAGNOSIS OF DISEASES OF THE HEART.

AORTIC OBSTRUCTIVE (*Systolic*), accompanies the first sound. Most intense at the base of heart; propagated along the aorta to second right costal cartilage, and heard all over the sternum. The second sound of the heart is diminished if the aortic valves are much impaired. This is also called *aortic direct*; cause, obstruction to the passage of blood into or through the aorta. Often found with A. regurgitant murmur. It may depend on anæmia, if so it will be intermittent and variable in intensity, and unaccompanied by weakening of the second sound.

AORTIC REGURGITANT (*Diastolic*), accompanies the second sound of the heart. Most intense at, or a little to the left of the center of the sternum, opposite the third intercostal space, and propagated downwards. Second sound weakened as in the aortic obstructive; cause, regurgitation of blood into left ventricle. Some-

times we have the hammering pulse with this lesion. Often found with A. obstructive.

MITRAL OBSTRUCTIVE (*Præ-Systolic.*)—Heard during the period of rest, beginning after, not with, the second sound, and arrested by the systole. Most intense about the apex of the heart, (see circle M, Fig. 1,) and often of a vibratory character. Pulmonic second sound intensified if right ventricle be hypertrophied: cause, obstruction to passage of blood from left auricle to left ventricle. Frequently found with M. regurgitant.

MITRAL REGURGITANT (*Systolic.*)—Heard with first sound, and most intense over the apex of the heart. Sometimes propagated laterally to the left, around to the inferior angle of the left scapula. Aortic second sound diminishes as regurgitation increases. (This lesion causes hypertrophy of the right ventricle, and then we have the pulmonary second sound increased.) (Heard at M, Fig. 1.) Cause, backward flow of blood from the left ventricle into the left auricle. Frequently follows inflammatory rheumatism.

TRICUSPID REGURGITANT (*Systolic.*)—Accompanies first sound of the heart. Heard over lower third of sternum and middle of the right ventricle. (See N, Fig. 1.) Generally associated with jugular pulsation. Cause, regurgitation of blood from the right ventricle into the right auricle.

PULMONARY OBSTRUCTIVE (*Systolic.*)—Accompanies the first sound of the heart. Heard at lower portion of second left costo-sternal articulation, (see D, Fig. 1,) propagated along

pulmonary artery to upper border of second rib. Cause, obstruction to passage of blood into pulmonary artery. Sometimes due to anæmia. Rarely heard.

PULMONARY REGURGITANT (*Diastolic*).—Accompanies the second sound of the heart. Heard at same place as P. obstructive, but propagated downwards toward the center of the sternum. Cause, regurgitation of blood from P. artery into R. ventricle. Exceedingly rare.

PERICARDIAL FRICTION.—May be rubbing, grazing, or grating in character; seems superficial. Synchronous with cardiac pulse, may accompany first, or second, or both sounds—generally the latter; usually, however, the friction sound will be heard immediately following the normal heart sounds, which retain their peculiar characters. Continues when respiration is arrested. Rythm of sound irregular; generally confined to cardiac region; most intense at the base of the heart; notably increased by pressure; often disappears with effusion into the pericardium.

HYDROPS PERICARDII (*Dropsy of the Pericardium*).—Increase in the area of dullness in the præcordial region vertically and laterally; bulging of the intercostal spaces, and sometimes of the whole præcordia. Heart's impulse felt above normal location, and diminished in force, or it may be altogether absent. Heart sounds remote or absent. The first sound, if heard, is short and sharp, like the normal second sound. Sometimes an undulatory movement of the intercostal space over the apex of the heart may be observed. If the effusion be

considerable, the region of dullness will assume a triangular form, with its base resting on the diaphragm and its apex at the first rib. When the collection of liquid is very large, the area of dullness will be correspondingly great, and may extend from nipple to nipple.

HYPERTROPHY OF THE HEART.

Area of dullness, and impulse increased; force of impulse visibly increased. Sometimes there is upheaval of the whole præcordia; apex beat, may be increased or diminished, and is found to the left and below the normal location. First sound, muffled, yet intense, extended and booming in character. When there is considerable dilatation with hypertrophy, the apex beat may be felt to the left of the nipple, and as low as the eighth intercostal space, and the impulse may be noted from the epigastrium to the third rib, with prolongation of both sounds, and their propagation over the entire chest. If *dilatation* predominates over hypertrophy, the impulse and apex beat are diminished, with increased area of dullness. The first sound is feeble, short and clicking in character; the second is often absent. Both sounds, if heard, have about the same duration. Sometimes a purring thrill may be noted.

FATTY DEGENERATION OF THE HEART.—Very feeble or imperceptible impulse and apex beat. First sound abrupt and feeble, or wanting; the second sound increased in intensity and duration. Heart's action very irregular.

"ASYSTOLISM.—The physical signs are those of dilatation of the right side of the heart. A short time before death, additional signs oc-

cur:"* viz., the impulse is enfeebled and the normal sounds and murmurs formerly present disappear, and only a humming sound is observed.

Synopsis of the Physical Signs involved in the Diagnosis of Pulmonary Affections.

BRONCHITIS.—Both sides affected; movements, percussion, vocal resonance and fremitus normal; feeble or temporarily suppressed respiratory murmur; sibilant or sonorous, or both, followed by mucous rales; rales inconstant and variable in location.

CAPILLARY BRONCHITIS.—Percussion and vocal resonance, and fremitus, usually normal—the latter may be increased; fine sibilant and subcrepitant rales on both sides; vesicular murmur enfeebled.

ASTHMA.—Respiration labored; respiratory rhythm irregular; normal vocal, and sometimes increased, percussion resonance; diffused sibilant and sonorous rales, often so intense as to be heard at a distance.

PULMONARY EMPHYSEMA.—Abnormal rotundity of one or more regions of the chest; respiratory movements vertical, and labored; feeble vesicular, and prolonged and blowing expiratory sound; ratio of duration of respiratory sounds inverted; percussion note vesiculo-tympanic; abnormal resonance of præcordia, with cardiac displacement; vocal resonance variable—often complicated by asthma.

PNEUMO-THORAX.—Abnormal rotundity, and immobility, with bulging of intercostal spaces

* Loomis' *Physical Diagnosis*.

of, and diminished or absent vocal and respiratory sounds and fremitus, with tympanitic or amphoric resonance, over the affected side. Where there is liquid along with air in the pleural cavity, it is called—

PNEUMO-HYDRO THORAX, and along with the above signs we have metallic tinkle, amphoric respiration and voice, succussion sound, and the evidences of pleural effusion.

PLEURISY WITH EFFUSION AND EMPYEMA.
—“ If the pleural sac be filled either with lympho-serous liquid or pus, universal flatness on percussion over the affected side. Generally absence of the respiratory sound, except over the compressed lung at the summit, and, here, bronchial respiration, enlarged dimensions of the affected side, if the liquid be sufficient to dilate the chest, as shown by mensuration or the eye. Deficient respiratory movements or immobility. The intercostal spaces on a level with the ribs, and sometimes bulging. Dislocation of the heart, its site being shown by the impulse or sounds. Normal vocal resonance diminished or suppressed. Vocal fremitus wanting. Exceptionally, the bronchial respiration emanating from the compressed lung is more or less diffused, and may extend over the whole of the affected side. If the chest be partially filled, flatness or dullness on percussion from base of chest, extending upward to a horizontal line denoting the level of the liquid when the patient is sitting or standing. Resonance extending below this line, in front, in some cases, when the patient lies on the back, owing to a change of the level of the liquid. Vesiculotympanitic resonance over the lung, above

the level of the liquid. Diminution or absence of respiratory sound below the level of the liquid. Above the liquid the respiration broncho-vesicular, approaching the bronchial, sometimes, near the liquid. Vocal resonance and fremitus diminished or wanting below the level of the liquid, and both may be exaggerated above the liquid. Diminution of intercostal depressions may be apparent when the chest is partially filled. Exaggerated respiration on the healthy side when the chest is partially, and still more when it is completely filled. Pleural friction sound sometimes prior to and with liquid effusion; frequently during and after absorption of liquid. A characteristic contraction of the chest on one side follows chronic pleurisy with considerable effusion." *

PULMONARY GANGRENE.—No specially distinctive physical signs. What we have are those of solidification, followed by evidences of breaking down of lung tissue, mucous rales and gurgling, with other physical signs of a cavity. Pneumothorax may supervene from perforation of the lung.

PULMONARY EDEMA.—Resonance on percussion diminished or absent; vesicular murmur feeble, or replaced by broncho-vesicular respiration. Subcrepitant, and sometimes the crepitant rale, and frothy sputa. Edema occurs at most dependent portion of the chest—usually both sides are affected.

PULMONARY APOPLEXY.—Physical signs the same as in P. œdema; occurring within a circumscribed space or spaces, with blood-stained sputa.

* Compendium of Auscultation and Percussion.—*Plint*.

PULMONARY COLLAPSE.—Dullness on percussion; absence of respiratory murmur; bronchial respiration; increased vocal femitus.

LOBULAR PNEUMONIA.—Feeble respiratory murmur; dullness on percussion; sometimes feeble bronchial breathing; fine mucous, or subcrepitant rales; usually both lungs affected.

PNEUMONIA (*Lobar.*)—First stage, (that of engorgement) respiratory movements restrained, and murmur diminished; vocal resonance and fremitus normal; slight dullness on percussion, and generally, the crepitant rale.

Second stage, (that of red hepatization, or solidification)—Absence of vesicular murmur. Bronchial respiration, with bronchophony and whispering bronchophony; increased fremitus, with marked dullness or flatness over affected lobe or lobes, and increased vesicular resonance and respiration over unaffected, and healthy portion of affected lung (usually the apex.) Prune juice sputa; heart sounds heard with abnormal intensity over consolidated lung.

Third stage, (that of gray hepatization, purulent infiltration, or resolution)—Gradual declension in intensity, and disappearance of abnormal sounds present in second stage; mucous and subcrepitant rales, (“*rale redux.*”) Sometimes a return of the crepitant rale.

CARCINOMA OF THE LUNG.—Affected side retracted, and respiratory movements abridged. Absolute dullness, with the other signs of consolidation.

PULMONARY TUBERCULOSIS (*P. Phthisis.*)—If the deposit be inconsiderable, slight dullness over (and sometimes vesiculo-tympanitic resonance, from lobular emphysema, may be found

bordering) the deposit. Increased vocal resonance; "rude" or broncho-vesicular respiration; exaggerated bronchial whisper; expiratory sound prolonged, and elevated in pitch. Crepitation, or subcrepitant, or mucous rales, and possibly a friction murmur. Pulmonary crumpling, jerking, wavy, or "cogged-wheel" respiration; abnormal transmission of the heart sounds, and depression of post-clavicular region. These signs are limited to the region of the deposit, which usually occurs in the apex of the lungs.

If the deposit be abundant, there will be markedly increased dullness, vocal resonance, (bronchophony) and fremitus, bronchial respiration and transmission of heart sounds, with exaggerated bronchial whisper, and frequently flattening of the infraclavicular region. Occasionally the deposit occurs at the base.

The signs of a *cavity* are cracked metal, tympanitic or amphoric resonance. Amphoric respiration and voice, cavernous respiration and voice, and gurgling.

DIAPHRAGMATIC HERNIA.—Presence of intestinal sounds; absence of respiratory sounds, and tympanitic resonance, without other explanation for its presence.

DIAGNOSTIC EXAMINATION OF THE URINE.

APPEARANCES, SPECIFIC GRAVITY, ETC., OF THE URINE.

The presence of *MUCUS* may cause urine to appear cloudy after standing a short time.

Mucus is coagulated by acetic acid, but the coagulum is not soluble in an excess of the acid.

Dilute mineral acids also coagulate mucin, but the coagulum is soluble in an excess of the acid, or a stronger acid.

The urine may be *opaque* when voided, from an excess of the *EARTHY PHOSPHATES*. These, after a short time, fall to the bottom. This precipitate is soluble in acetic or nitric acid. The application of heat renders the urine turbid.

The urine may be *turbid* from the presence of the *MIXED URATES*; heat causes this turbidity to rapidly disappear.

Uric acid is often deposited on the sides and bottom of the "vessel" as a *red* or *yellowish red* sediment. This is commonly called "sand gravel," "red-pepper grains," etc.

The *brick-dust deposit* so often found in highly colored or concentrated urine, is the *URATE OF SODIUM*.

Acid urine containing *BLOOD* is blackish-brown, or "smoke hued."

Alkaline urine containing blood is bright blood red.

Urine containing blood is *always* albuminous. The blood corpuscles may be detected with the microscope.

The urine may be *opalescent* from the presence of pus. Heat or nitric acid renders it more opaque, and agitation with æther will cause oil globules to rise to the surface.

If, on standing, there be a considerable deposit of pus, decant the urine, and add Liq. Potass., and the pus will be converted into a viscid mass resembling mucus.

CHYLOUS urine is often opalescent. By agitating it with æther, oil globules will rise to the surface in abundance.

The normal specific gravity of the urine is about 1020; it varies, however, with the seasons, and will be found greater in summer than in winter.

The normal amount of urine voided in twenty-four hours is about fifty fluid ounces.

The specific gravity is increased in diabetes mellitus (sometimes ranging as high as 1040—1050), acute fever, first stage Bright's disease (from presence of blood), excess of urea, etc., and diminished in Bright's disease (except acute stage), hysteria, diminution of urea, hypertrophy of the heart, etc.

The normal amount of the urine is greatly increased in diabetes insipidus, and mellitus, hysteria, etc., and diminished in cirrhosis of the liver, Bright's disease, etc.

Diminution in both the quantity and specific gravity is presumptive evidence of Bright's disease.

CHEMICAL EXAMINATION OF THE URINE.

ALBUMEN.—To detect; filter the urine, if not perfectly clear.

(a) *Heat*—Place some of the suspected urine in a test tube, add a few drops of acetic acid, if not already of acid reaction, and boil over a

spirit lamp. Opacity resulting may be due either to albumen, or earthy phosphates. Now add a few drops of nitric acid; if albumen, the precipitate remains, or is increased. If due to earthy phosphates, it immediately disappears.

If, after having produced opacity by boiling the urine, we immediately add strong sol. potass. caust., it will disappear if due to albumen, and remain if due to earthy phosphates.

(b) *Nitric Acid*—Allow pure nitric acid to trickle down the tube containing suspected urine, and if albumen be present a white zone will be seen at point of contact between urine and acid. An appearance very similar to the above may be owing, however, to the presence of the *urates*; but the application of heat will cause it to disappear, if due to the latter; whereas, it will remain, or be increased, if caused by the former. If but a drop or two of acid be used, it may only acidify the urine, and a quantity equal in bulk to urine may redissolve the albumen.

(c) *Picric Acid*—Add, drop by drop, a saturated watery solution of picric acid to the suspected urine, and as each drop descends through the liquid, it will be followed by an opaque white cloud, if albumen be present. If the quantity of albumen be considerable, this test is a very beautiful one.

TO DETECT SUGAR.

A specific gravity of 1030 or upward, affords strong presumptive evidence, and if along with this the quantity of urine voided in twenty-four hours exceeds fifty fluid ounces, and is quite pale, the probabilities are increased.

First examine for albumen, and if present remove it by boiling or filtration.

(a) **MOORE'S TEST.**—Add to urine half its quantity of liquor potassa or soda (which has been kept in a green glass bottle), and boil; if sugar be present, the liquid will assume a yellowish brown color, becoming darker as the boiling is continued. If the quantity of sugar be great, the color will be almost black after prolonged boiling.

HELLER's modification of the above consists in now adding a little nitric acid, which will give a clear liquid, having the odor of burnt molasses.

(b) Add to the urine one-half its volume of sol. pot. caust. and filter to remove the earthy phosphates, then use the following, known as

TROMMERS' TEST.—Add to suspected liquid sufficient of a sol. cupri sulph., to give it a bluish tinge, then add of sol. pot. or soda till the previous volume is increased one-half; the precipitate (bluish, if sugar be present, greenish, if not,) is the hydrated protoxide of copper (and is re-dissolved on the addition of more alkali, if sugar is present, giving a clear, blue liquid.) Now boil, and if there is sugar you will have a yellowish precipitate (hydrated cupric suboxide), which, by loss of water, becomes *red* suboxide of copper, and falls to the bottom of the tube. Boiling should not be prolonged. The color must be an actual yellow or red.

(c) **BÆTGER'S BISMUTH TEST.**—Add to urine half its volume of sol. pot. caust. or soda; shake and boil for two or three minutes. If considerable sugar is present, metallic bismuth will be found as a black deposit on the tube.

if only a little sugar be present, the bismuth will only become grayish.

(d) IMPROVED FEHLING'S TEST.—Dr. W. S. Haines* recommends the following modification of Fehling's test liquid :

℞ Cupri sulphatis 3ss.

Glycerinæ 3 ij.

Aquæ distil. ʒ. iij. M. *Et adde :*

℞ Pot. hydrat. (in sticks) 3 iss.

Aquæ distil. ʒ iij. M.

Stir till any precipitate which may form is redissolved.

This solution is perfectly clear, dark blue, and free from sediment.

Heat a drachm or two of the solution in a test tube until it boils (no change will occur if the solution is well made), add a drop or two of the suspected urine, and shake the tube to cause thorough admixture of its contents, and heat as before. If sugar be present in considerable quantity, an abundant precipitate of the yellowish red suboxide of copper will be found remaining suspended in the liquid for a short time, rendering it almost opaque to transmitted light. If the quantity of sugar be small, no precipitate will appear, on the addition of but a few drops of the suspected urine.

But now add to the liquid already in the tube an amount equal to one-half of its volume, of the suspected urine, and again apply heat, when, if any sugar be present, the characteristic precipitate of the cuprous oxide will appear. If there be no sugar, no change will occur except a lightening of the color of the test liquid from dilution, and the appearance of the phosphates as a white flocculent precipitate.

*Med. Examiner, Mo. Clinical Record, January. 1875.

(e) **FERMENTATION TEST.**—Place 5 ss. of brewer's yeast in a test tube, fill with urine and close with a perforated cork, through which passes a bent glass tube, one limb reaching nearly down to bottom of test tube, and the other opening into a glass or bottle. Keep the urine at a temperature of about 65 F. If sugar be present, fermentation will occur, and the urine will flow out through the glass tube into receptacle. This test is thoroughly reliable.

TO DETECT THE CHLORIDES, PHOSPHATES, ETC.

Test for albumen, and if present in considerable quantity, remove it, for it will interfere with reaction.

NITRATE OF SILVER TEST.—Add to urine tolerably free from albumen, a few drops of sol. argenti nit., and a cloudy precipitate will be produced if chlorides or phosphates be present. Now add a few drops of nitric acid and the phosphates will be redissolved; but the chlorides will remain as opaque chloride of silver.

The chlorides are notably diminished in fevers and pneumonia; sometimes absent in the latter. Their return in the urine is a favorable indication.

The *earthy phosphates* are deposited on heating urine rendered decidedly alkaline by the addition of caustic ammonia or sol. potash.

Diminished in renal disease, etc.; increased in disease of nervous centers, rickets, dyspepsia, chronic rheumatoid arthritis, etc.

The *Alkaline Phosphates*—Adding a sol. argenti nit. to urine containing the alkaline phosphates, will throw down phosphate and chloride of silver. Precipitate yellow in color. Ammonia will dissolve either or both precipitates, but

nitric acid will only dissipate the phosphate of silver. By again neutralizing the acid with ammonia, the phosphatic precipitate will reappear, and be again dissipated by excess of alkali.

Urea.—If a few drops of urine be placed in a watch crystal, a drop of nitric acid added, and the whole carefully heated over a spirit lamp, and allowed to evaporate, characteristic six-sided quadrilateral crystals of nitrate of urea will appear under the microscope.

Electricity as an Aid to Diagnosis.

If the muscles and nerves are in a normal condition, muscular contraction will result upon the application of either the Voltaic (continuous) when slowly interrupted, or Faradic (interrupted) current.

HEMIPLEGIA.—If the muscular irritability to both currents be normal, the muscles have preserved their integrity.

Faradization of the motor nerves will produce contraction, if the disease be central.

Faradization of the motor nerves will not induce contraction of the affected muscles, if the disease be peripheral.

Generally, the muscular response is the same to the Voltaic and Faradic currents, but occasionally that to the Faradic is diminished or lost, while that to the slowly interrupted Voltaic is maintained or increased. When this occurs, it is due to some lesion of the motor nerves interfering with the transmission of the Faradic current, and the increased response to the Voltaic current is due to the Hallerian irri-

tability resident in muscular tissue. This reaction only exists in peripheral nerve lesion, and paralysis from this cause is called peripheral palsy.

IN PARALYSIS FROM DISEASE OF THE CORD.—There is diminution of irritability to both the Voltaic and Faradic currents.

IN RHEUMATIC PALSY—The muscular irritability is normal or increased to both the Voltaic and Faradic currents.

IN LEAD PALSY—The muscular irritability to the Faradic current is greatly diminished or lost, while that to the slowly interrupted Voltaic is increased.

IN INFANTILE PARALYSIS—The reaction is the same as in lead palsy.

IN PROGRESSIVE MUSCULAR ATROPHY—The muscular response to either current is greatly diminished or abolished in the affected muscles.

IN HYSTERICAL PARALYSIS—The electro-sensibility is greatly diminished or absent, while the muscular irritability is normal.



The Thermometer in Diagnosis.

Thermometry is one of our most trustworthy sources of information in diagnosis; enabling us to determine oftentimes, with absolute certainty, as to the condition of our patient, when without it we should have to be content with conjecture, and deal largely with "probabilities."

The best instrument for all purposes is the straight, self-registering thermometer, with a scale divided into $.5^{\circ}$ F. Before using it, the

"index" should be caused (by jarring the instrument) to descend to about 94° F.

In determining the temperature with either the above, or the non-registering thermometer, the following rules should be observed :

The instrument, operator's hand, and part to which the thermometer is applied (if it be on the surface of the body, as the axilla or groin,) should be well dried.

The thermometer should be held in the hand or otherwise gently heated, until the mercury stands at 98° F., if the non-registering instrument be used.

The patient should be in bed for an hour previous to the examination.

The bulb of the instrument should be thoroughly covered, and the parts snugly in contact with its whole surface, and care exercised to maintain these conditions.

The instrument should remain *in situ* for from seven to fifteen minutes.

Place the instrument so that the graduated scale will be visible.

Note the rapidity of the rise of the column of mercury.

Observe the temperature *before* removal of the instrument, if the non-registering one is used.

Be careful not to jar the self-registering thermometer in removing it from the patient. It is well to read off the recorded temperature both *before* and *after* removal of this instrument.

Thermometrical observations are most usually made by placing the thermometer in the axilla, though it may be applied between the thighs, or introduced into the mouth, rectum, or vagina. The temperature of the mouth,

however, is constantly changing with each respiration, and consequently will not always indicate that of the body at large.

The temperature should, if possible, be taken at least every morning and evening; and if the disease be of a very active form, or the diagnosis doubtful, it should also be recorded at 12 m. and p. m.

The normal temperature varies in different individuals, and in the same individual from 98 to 98.7° F. It is a little higher in the evening than in the morning.

A temperature persistently above 99.5° F., or below 97.3° F., invariably indicates disease.

Transient elevations or depressions of the temperature, often result from stimulus, exercise, exposure, diet, etc.

A temperature below 95.° F., and above 112.55 F., is surely fatal.

If the temperature rise to 107° F., the disease will ordinarily eventuate in death.

The diurnal variation noted in health will be found in febrile diseases in an exaggerated degree—i. e., the evening temperature is higher than that found in the morning; while in inflammatory troubles the temperature is more constant.

A single thermometrical observation is of no diagnostic value; but taken in conjunction with other symptoms, becomes an important element in differentiation.

An axillary temperature below 100° F. excludes the ordinary forms of fever, but a temperature between 99 and 100° F., is often observed in the first stage of tuberculosis.

A temperature below 98° is commonly found in the aged, and very feeble, when the subjects of grave disorders.

A temperature of 106° F. is not of grave import, when occurring in the different forms of intermittant fever; but a temperature of 107° F. is indicative of malignancy, and occurring two days consecutively in the continued, or eruptive fevers, or inflammatory troubles, is generally followed by death.

A sudden elevation of the temperature to or above 109° F., often occurs in typhus, sun-stroke, tetanus, pyemia, etc., just prior to dissolution.

A slight average elevation of the temperature above 100° F., is met with in the beginning of acute inflammations, mild forms of fever, and many chronic affections, and is varied in its significance.

A moderately high average temperature above 102° F. is met with in acute inflammations of the mucous and serous membranes, etc.

A high average temperature, above 104° F., occurs in remittant, relapsing, and continued fevers, grave pneumonia, etc.

If, in rubeola, after the eruption has disappeared, the temperature remains high, some complication is about to occur.

In typhoid fever, the temperature, besides following regular diurnal variations, will, for the first three or four days, have a regular daily elevation of about one degree—i. e., first day 99.5° F. in the morning, and 101.5° F. in the evening; second day, 100.5° F. in the morning, and 103.5° F. in the evening; third day, 101.5° F. in the morning, and 104.5° F. in the evening.

In mild cases of this disease, the evening temperature does not usually exceed 103.5° F. If, however, there is an evening temperature of 103.5° F., followed by a temperature of 104. the next morning, with the evening temperature still higher, it forbodes danger. Or a sudden elevation of evening temperature to 105° F., is of equal significance: or a sudden and marked reduction of the temperature indicates danger.

A sudden reduction of the temperature below 98° F. during the third week of typhoid fever, gives strong presumptive evidence of hæmorrhage, or perforation of the bowel.

A gradual, constant, and regular declension of the temperature, when abnormally elevated, is always indicative of convalescence.

The temperature of the vagina is 0.38° F. higher than that of the axilla, and that of the non-gravid womb is 0.29° F. above that of the vagina.

During the latter months of pregnancy, the uterine temperature is from 1.44 to 1.62° F. above the axillary.

The temperature of the new-born infant is higher than that of the mother, both during and after labor.

The uterine temperature is about 0.90° F. above the vaginal during labor, if the child be alive: but if it perish before delivery, this difference is notably diminished.

LANE MEDICAL LIBRARY

To avoid fine, this book should be returned on
or before the date last stamped below.

--	--	--

The Pulse.

Ages.

No. of Pulsations.

Heberden Sommering Moller.

150

176.3 Shaw, A.B.

9125

853

Epitome of percussion

1875

and auscultation.

NAME

DATE DUE

156130

1006115

906100

85690

MISSOURI

Clinical Review

A MONTHLY JOURNAL OF
Medicine and Surgery

EDITORS:

W. A. HARDAWAY,

Clinical Lecturer on Diseases of the Skin,

ALEX. B. SHAW, M.D.

*Adj. Prof. of Medical Medicine,
Diagnosis, Med. Eccl. Coll.*

MISSOURI CLINICAL REVIEW

Lectures,

communications.

Reports from hospitals.

...

from current literature.

translations from foreign

medical journals.

abstract of the papers

of societies.

book notices.

...

Subscription \$2.00

W. A. HARDAWAY,

...